

REMARKS

The Applicants respectfully request reconsideration of this application in view of the above amendments and the following remarks.

Double Patenting

Claims 54-56, 59, 61-65, 67, 39 and 70 are rejected under the judicially created doctrine double patenting over claims 1-3, 5 and 6 of U.S. Patent 6,315,038 of Chiu.

Without admitting the appropriateness of the judicially created double patenting rejection, the Applicant submits herewith a Terminal Disclaimer in compliance with 37 C.F.R 1.321 in reference to U.S. Patent No. 6,315,038 signed by a registered agent of record to overcome the Examiner's rejections of claims 54-56, 59, 61-65, 67, 39 and 70. Additionally, for the record, the Applicant submits that the present claims and the claims of U.S. Patent No. 6,315,038 were commonly owned or subject to an obligation of assignment to the same entity at the time the inventions were made. Accordingly, the applicant respectfully asserts the Examiner's rejection has been overcome.

35 U.S.C. §102(b) Rejection - Yamagata

The Examiner has rejected claims 54-56, 58, 59 61-63, 67 and 69 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,552,637 issued to Yamagata et al. (hereinafter referred to as "Yamagata"). The Applicants respectfully submit that the present claims are allowable over Yamagata.

Amended claim 54 recites an apparatus comprising “*a thermal interface material having a first side to attach to a cooling device, and a second side to receive heat from an integrated circuit by contacting the integrated circuit at a heat transfer area; an adhesive attached to the first side wherein the adhesive is attached to a portion of the first side that is outside the heat transfer area*”. Yamagata does not teach or suggest such limitations.

Firstly, the Examiner has argued in essence that the wiring board 6 discussed in Yamagata reads on the thermal interface recited in claim 54. Applicants respectfully disagree. Yamagata clearly discusses that wiring board 6 is formed of a semiconductor substrate or the like (see e.g., column 4, lines 63-64). Applicants submit that a wiring board formed of a semiconductor substrate or the like is not a thermal interface material. Thermal interface materials are known in the arts to represent conductive heat transfer materials designed specifically to provide an interface to transfer heat from a heat source, such as a chip, to a cooling device, such as a heat sink. Representative non-limiting types of known thermal interface materials include greases, gels, thermally conductive adhesives, thermal tapes, elastomeric pads, and phase change materials. The wiring board of Yamagata is not one of such materials. Furthermore, Yamagata does not teach or suggest that the wiring board is a thermal interface material. Accordingly, it is simply improper to consider the wiring board as a thermal interface material.

Secondly, claim 54 clearly states that the thermal interface has a first side to attach to the cooling device. However, as plainly shown in FIG. 5 of Yamagata, the wiring board 6 is attached to the package 3 via the adhesives 1,2. The wiring board 6 is not attached to the heat radiating plate 9.

Anticipation under 35 U.S.C. Section 102 requires every element of the claimed invention be identically shown in a single prior art reference. The Federal Circuit has indicated that the standard for measuring lack of novelty by anticipation is strict identity.

“For a prior art reference to anticipate in terms of 35 U.S.C. Section 102, every element of the claimed invention must be identically shown in a single reference.” In Re Bond, 910 F.2d 831, 15 USPQ.2d 1566 (Fed. Cir. 1990).

For at least these reasons, claim 54 and its dependent claims are believed to be allowable over Yamagata.

Claim 63 and its dependent claims are believed to be allowable over Yamagata for one or more reasons similar to those discussed above.

35 U.S.C. §103(a) Rejection - Yamagata in view of Todman

The Examiner has rejected claim 65 under 35 U.S.C. §103(a) as being unpatentable over Yamagata in view of U.S. Patent No. 5,635,917 issued to Todman (“Todman”).

As discussed above, claim 65 is believed to be allowable at least for its dependency on claim 63. Applicants therefore do not address the propriety of the rejections of dependent claim 65. Similarly, the Applicants do not address the propriety of the combination of Yamagata and Todman, or other aspects of the rejections.

35 U.S.C. §102(e) Rejection - Baska

The Examiner has rejected claims 71-73 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,745,344 issued to Baska et al. (“Baska”).

As amended, claim 71 is believed to be allowable over Baska.

Claim Objections

The Examiner has objected to claims 57, 60, 66 and 68 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for finding allowable subject matter. At this time, Applicants believe that a broader claim may be allowed, and therefore will continue to pursue such broader claims.

Conclusion

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance. Applicants respectfully request that the rejections be withdrawn and the claims be allowed at the earliest possible date.

Request For Telephone Interview

The Examiner is invited to call Brent E. Vecchia at (303) 740-1980 if there remains any issue with allowance of the case.

Request For An Extension Of Time

The Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17 for such an extension.

Charge Our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,
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